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ABSTRACT

Supporting performance objective 70 of the V-TECS (Vocational-Technical Education Consortium of States) Paying and Receiving Bankteller Catalog, this module includes both a set of student materials and an instructor's manual on using the 10-key adding machine with the left hand. (This module is the first in a set of eight on banktelling, [CE 019 471-478].) The student materials include twelve learning activities (with answer keys) on addition, subtraction, subtraction with credit balance, subtotals, non-add key, multiplication, percentages, and division. The instructor's manual includes information on using the module, answer keys for the learning activities, a pre- and posttest (with answer keys), and a color coded poster illustrating the machine parts. The materials are designed for self-paced individual instruction and may be adapted for use with large groups. (A related set of modules on bookkeeping [CE 019 480-489] is also available.) (JH)

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BT
II–A

OPERATE A 10-KEY ADDING MACHINE WITH MY LEFT HAND?? SURE!!!

STUDENT'S MANUAL

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Anne L. Matthews

Anne L. Matthews, State Supervisor
Office Occupations Education

INTRODUCTION TO BANKTELLING INSTRUCTIONAL MATERIALS

The modules developed in South Carolina for the bankteller catalog are designed to provide audio, visual, and printed supplementary materials needed by the instructor and/or student to achieve the objectives stated in the catalog. The materials were designed as modules so that they may be flexibly inserted into an on-going program, as well as provide for maximum utilization via a rotation schedule.

These materials provide supplemental units of instruction in the following areas:

Module No.	Tasks	Performance Objective Nos.
II-A	Using the 10-Key with Left Hand	70
III-A	Handling Deposits	62, 14, 52, 53, 54, 55
III-B	Issuing and Cashing Checks (Certified, Cashiers, and Travelers) and Ordering Personal Checks	42, 47, 58, 57, 61
IV-A	Processing Coins	24, 17, 27, 23
IV-B	Sorting, Stacking, and Strapping Currency	25, 18, 30, 31, 26, 32
V-A	Examining Checks for Acceptability	12
V-B	Inspecting Customer Identification	19
V-C	Cashing Checks (Personal)	39, 40

The modules typically include a performance objective, definitions, prerequisites, equipment, introduction, directions, learning activities, self checks, and tests (pre and post). The instructor's manual contains notes, keys, forms for duplication, instructor's checklists, scripts for recording, and supplementary materials.

Before you release the packages to your students, review each package within your department, discuss how to best utilize the materials, choose the desired course, and plan the sequence for each unit of instruction. Other considerations are required:

1. Insure that necessary equipment is available and in proper working order.
2. Insure that necessary audio materials are recorded and easily available.
3. Obtain the necessary equipment needed for filmstrip viewing and listening.
4. Replenish consumable supplies after each student completes the module.

The modules may be used in the following courses: Office Procedures, Cooperative Office Education, Senior Intensified Program, Bookkeeping, Typewriting, Business Mathematics, Office Machines, and Introduction to Business. It is recommended that the banking modules be taught as a unit of instruction.

A simulated teller's cage using role playing customers (students) is desirable. Perhaps a rotation plan could be devised to provide each student with an orientation to simple bankteller duties. A teacher may, however, select single modules, provided no prerequisite skills are listed.

The supplementary materials for the bankteller catalog are designed for individual, small-group or large-group instruction. You may need to adapt materials in a few instances for large-group instruction. When used individually, students will be able to progress through the materials at their own pace.

ANSWER SHEET

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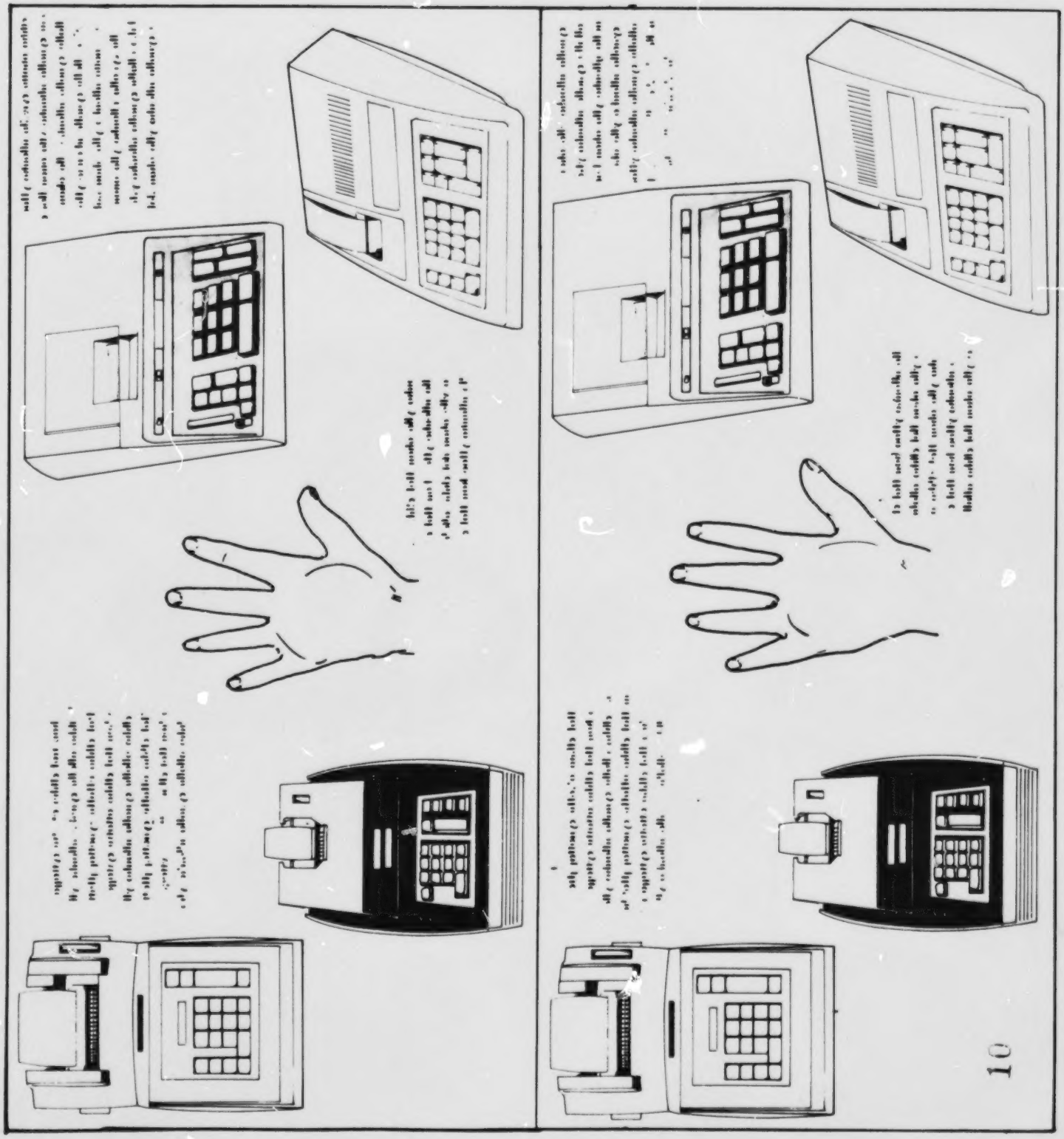
INTRODUCTION

This booklet is designed to teach you to operate a 10-key adding machine or calculator with your left hand.

If you are right-handed, you may consider this an odd task to be asked to perform. However, research indicates that right-handed students who learned to operate the 10-key adding machine by the left-handed method made the same progress in speed and accuracy as those students who learned by the right-handed method. Since using the left hand will free the right hand for writing, the left-handed method may prove to be preferable, especially for those students who will use adding machines and/or calculators frequently in their course of study, and later in their jobs.

EXAMPLE OF COLOR CODING CHART

A separate color coding chart is provided for your use.



MACHINE PARTS

PART NO.	PART NAME
1.	Clear Key
2.	Clear Keyboard Key
3.	Decimal Point Key
4.	Decimal Selector
5.	Division Key
6.	Equals Key
7.	Equals-Minus Key
8.	Equals-Plus Key
9.	Error Light
10.	Memory Minus Key
11.	Memory Plus Key
12.	Memory Subtotal Key
13.	Memory Total Key
14.	Minus Key
15.	Multiplication Key
16.	Non-Add Key
17.	Numeral Keys
18.	On-Off Switch
19.	Paper Advance
20.	Percent Key
21.	Plus Key
22.	Repeat Key
23.	Repeat Subtraction Key
24.	Reverse Key
25.	Subtotal Key
26.	Total Key
27.	Zero Keys

GENERAL INSTRUCTIONS

1. Clear your desk of everything except the necessary items that will be used to do the following exercises—a 10-key adding machine or calculator, this booklet, the color coding chart, pen or pencil, and an answer sheet.

2. Position your machine on the left side of your desk. Operate the machine with your left hand using the touch method.

3. Read the instructions for each exercise carefully before doing the problems.

4. As you go through this booklet, do each problem as shown. Do not write your answers in this booklet. When you are ready to begin Learning Activity 1, ask your instructor for an answer sheet. Record your answers for three learning activities on the same answer sheet. When each answer sheet is complete, give it to your instructor.

5. The home keys are 4, 5, and 6 and should be depressed with the third, second, and first fingers respectively. Your hand should be positioned over the 4, 5, and 6 keys so that you can comfortably reach the other number keys.

6. Strike only one key at a time and release the key before striking the next one.

7. From the illustrations on the color coding chart that is included with this booklet, determine which keyboard is most like your machine. Follow the color coding chart to determine which finger should be used to depress each key. You will need to refer to this chart from time to time.

   Example: The first finger is labeled orange. Therefore, depress the keys that are colored orange with the first finger.

8. If your machine is a 10-key adding machine, practice striking each number key firmly and quickly until you can remember where each number key is located. Refer to the color coding chart to determine which finger to use for each key. If your machine is an electronic calculator, practice striking each number lightly and quickly until you can remember where each key is located. Refer to the color coding chart to determine which finger to use to depress each key. You will not need to depress the keys on an electronic calculator as firmly as you will a 10-key adding machine. If your machine is different from the examples shown, ask your instructor to clarify any directions that you don't understand.

9. If you have any questions at this point, ask your instructor. If not, begin Learning Activity 1 after completing the general instructions.

10. Remember, record all answers on an answer sheet that will be provided by your instructor.

11. Check your answers after completing each exercise. An answer key is provided on pages 32-37.

LEARNING ACTIVITY 1 - ADDITION

(4,5,6,0, Total Key, Plus Key, Correction Key)

Before beginning any operation, depress the total key using the appropriate finger so that the machine will be clear. The total key may look like one of these:

[T] or [TOTAL] or [*] or [TOT]

Check your machine and then your color coding chart to determine the correct key. Now, depress the total key. After depressing the total key, the paper tape on your machine may look like this:

[.00T] or [.00*] or [.00 TOT]

Some machines don't print zeros. On these machines the symbols "T" or "*" may appear alone to tell you that the machine is clear.

The plus key is used to add numbers. It looks like this:

[+]

Find the plus key on your machine. Determine the correct finger to use for the plus key by looking on the color coding chart.

Again, refer to the color coding chart to determine which finger should be used to depress the home keys, 4, 5, 6. Note that the 4 is depressed with the third (ring) finger of the left hand; 5 is depressed with the second (middle) finger of the left hand; and 6 is depressed by the first (index) finger of the left hand.

Depress [4], [5], [6], [+]

Skilled operators use the touch method when operating a 10-Key adding machine or calculator. This means you, too, should try not to look at your hand once you have located a new key. Instead, concentrate on the problems in the booklet. Soon, you'll be a natural.

Without looking, find the home row. Check to be sure your third, second, and first fingers are correct. Complete the practice problem by depressing [6], [5], [4], [+], [T]. You will not have to depress [T] again before beginning the next problem. The machine has been cleared by taking the total for this problem.

Your tape should look like this for the practice problem:

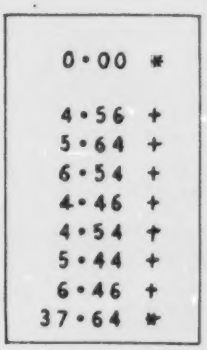
```
0.00 *


4.56 +
6.54 +
11.10 *
```

A decimal point may appear in your answer, but the correct answer is 1,110. Some machines automatically print decimals. Be careful when recording answers. IF THERE IS NO DECIMAL POINT IN THE PROBLEM, DO NOT RECORD A DECIMAL POINT IN YOUR ANSWER.

Some machines have different zero keys. The zero may look like this [0] or if you desire two zeros, it may look like this [0 0] . Some machines even have a third key used for three zeros which looks like this [0 0 0] . Locate the zero(s) on your machine. Depress it, using the correct finger as indicated by the color coding chart.

When doing the problems that follow, you may find the clear key helpful if you make an error. If you depress the wrong number key, depress the clear key to take that number out of the machine, then depress the correct number and continue the problem. Locate the clear key on your machine so that you'll know where it is if you need it.

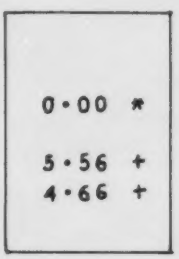
Use the above procedure for the following addition problems. Consult the color coding chart if you cannot remember which finger to use to depress a particular key. Compare your first problem to the tape below:



If your answer is different from the answer on the tape, check each number on your tape against the numbers in the problem in this booklet. Locate your error, then do the problem again.

Be sure to check your answers after completing the problems. The answer key may be found on pages 32-37 of this package.

Add 5.56 + 4.66 on your machine.



Is the correct answer 10.22 or 1,022?

Hint: Does the problem have a decimal?

LEARNING ACTIVITY 1– ADDITION

New Keys: 4, 5, 6, and 0

1.
4.56
5.64
6.54
4.46
4.54
5.44
6.46

2.
556
546
555
645
456
445
545

3.
656
466
646
564
664
456
565

4
44.56
45.66
54.46
56.44
64.55
65.46
55.64

5.
5,465
4,644
6,545
4,566
5,645
6,546
4,665

6.
4,506
6,405
5,046
4,605
4,050
5,600
6,004

7.
50.66
45.05
46.50
64.55
54.06
66.40
56.45

8.
40.55
45.64
56.40
64.05
50.45
46.06
54.60

LEARNING ACTIVITY 2-ADDITION

Determine which finger to use for the 7, 8, and 9 keys by looking at the color coding chart. Notice that the same finger is used for the 7 that you used for the 4. The same finger is used for the 8 that you used for the 5, and you'll use the same finger for the 9 that you used for the 6.

Do the following problems using the same procedure that you used in Learning Activity 1. Remember, we're using the touch method so don't look at your hand. Keep your eyes on the problems!

Here's a tape showing problem 1.

```
   0•00  *

   7•89  +
   8•97  +
   9•78  +
   7•98  +
   7•88  +
   8•79  +
   9•87  +
  61•16  *
```

Check your work against the tape. If your answer does not agree, locate your error before continuing. Be sure to check all your answers when you finish Learning Activity 2. The answers are located at the end of this package.

LEARNING ACTIVITY 2 - ADDITION

New Keys: 7, 8, and 9

Do the following problems using the same procedure used in Learning Activity 1.

1.
789
897
978
798
788
879
987

2.
7.78
8.97
7.97
8.78
9.78
8.98
7.99

3.
7.87
6.78
7.85
9.68
7.97
8.97
9.78

4.
949
767
585
946
756
956
754

5.
94.90
59.05
97.95
85.84
76.58
48.46
68.40

6.
7,574
6,789
7,857
9,846
7,479
4,860
9,706

7.
5,469
8,577
7,068
4,975
6,076
5,508
9,758

8.
4.86
8.59
6.57
7.09
9.54
5.66
7.86

LEARNING ACTIVITY 3– ADDITION

After completing this learning activity, you will have learned all the number keys.

Now, look at the color coding chart to determine the fingering for the 1, 2, and 3 keys. Notice that the third finger is used for the 1 (the same as for the 4 and 7 keys); the middle finger is used for the 2 (the same as for the 5 and 8 keys); and the index finger is used for the 3 (the same as for the 6 and 9 keys).

Complete this learning activity by following the same procedure that was used in Learning Activities 1 and 2. Be sure to check your answers when you've finished. A paper tape showing Problem 1 is given here to aid you.

```
 0•00  *

 1•23  +
 2•33  +
 1•31  +
 2•31  +
 3•12  +
 1•33  +
 2•13  +
13•76  *
```

LEARNING ACTIVITY 3 - ADDITION

New Keys: 1, 2, and 3

1.
123
233
131
231
312
133
213

2.
232
323
131
212
311
231
132

3.
314
235
151
243
166
316
261

4.
241
362
351
243
213
512
264

5.
15.95
65.51
96.51
45.25
56.51
14.59
61.95

6.
52.58
35.83
26.58
65.82
52.84
46.82
58.62

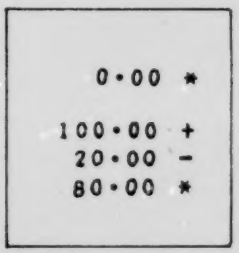
7.
36.56
64.53
57.53
53.26
46.35
25.64
53.75

8.
3,515
5,957
2,585
3,696
1,474
4,616
3,575

LEARNING ACTIVITY 4 - SUBTRACTION

Obtain an answer sheet from your teacher. Since you've learned all the number keys, fingering for these keys will not be given again. If you need to review at any time, look at the color coding chart.

The subtraction key is used to determine the difference between two figures. Assume that the amount of an employee's earnings is $100, but deductions for taxes and bonds amount to $20. To find the employee's **net pay** (take home pay) subtract the total deductions, $20, from the total earnings, $100. The amount from which something is subtracted ($100 in this situation) is called the **minuend**. The amount to be subtracted ($20 in this situation) is the **subtrahend**. The answer to a subtraction problem is called the **difference**. The tape below shows this problem with each number labeled. Learn the new terms in this lesson.



minuend
subtrahend
difference

LEARNING ACTIVITY 4 - SUBTRACTION

Refer to the color coding chart to determine which finger should be used to depress the minus (–) key. Proceed as follows to do Problem 1.

Depress the **minuend** (top number), 45.73; depress + .
Depress the **subtrahend** (bottom number), 21.68; depress – .
Depress the total key to find the **difference**.

Here is the tape showing Problem 1. If our answers do not agree, locate your error before continuing.

Record your answer, 24.05, on the answer sheet.

Follow this procedure to do Problems 2 through 10. Remember, record a decimal point in your answer only when a decimal point is used in the problem. Check your answers when you've finished.

1. 45.73
   –21.68

2. 90.47
   –46.81

3. 7,548
   – 3,294

4. 5,286
   – 497

5. 2,472.50
   –1,387.75

6. 743
   – 257

7. 5,750.00
   – 3,500.00

8. 763.47
   – 38.42

9. 16,894
   –10,235

10. 4,570
    – 692

LEARNING ACTIVITY 5- SUBTRACTION WITH CREDIT BALANCES

A credit balance is an answer which is less than zero. Assume that we have $450 and need to pay bills totaling $642. To determine how much more money needs to be earned before we'll have enough to pay all the bills, subtract $642 from $450 by using the following procedure. Depress $450, depress [+] . Depress $642, Depress [−] . Depress [total] . Look at the tape.

The answer is a Credit answer of $192.

When the subtrahend is a larger number than the mimuend, the difference is a credit figure.

Example:
424 minuend
−653 subtrahend

−229 difference

Use the following procedure to do Problem 1:

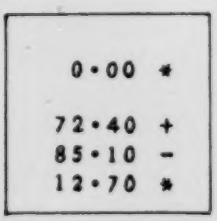
Depress 7,240, depress [+] ;
Depress 8,510, depress [−] ;
Depress "Total" to find the difference.

RECORDING CREDIT BALANCES

If your machine has a credit balance feature, the answer will show as 1,270 with "Cr.", "C", or "–" beside the answer. Some machines print credit balances in red ink.

If your machine does not have a credit balance feature, the figure, 999,987.30, will appear. This is not the answer. To get the answer depress the keys, 999,987.30, and depress the minus (–) key. Depress the total key to get the answer. Be sure to indicate on your answer sheet that the answer is a credit balance by writing a minus (–) before the answer or "Cr." after the answer.

This tape shows problem 1. The answer has a credit balance.



Follow the procedure that is appropriate for your machine to do Problems 2 through 10. Check your answers when you've completed the problems.

LEARNING ACTIVITY 5 - SUBTRACTION WITH CREDIT BALANCES

1. 7,240 − 8,510 = _____

2. 52.49 − 58.65 = _____

3. 157.86 − 385.42 = _____

4. 9,760 − 10,470 = _____

5. 356 − 721 = _____

6. 88.35 − 110.10 = _____

7. 1,870 − 5,723 = _____

8. 2,467.15 − 4,782.30 = _____

9. 15.60 − 38.73 = _____

10. 857 − 942 = _____

Some of the following problems will result in a credit balance. Indicate a credit balance in your answer by writing a minus (–) before the answer or by writing "Cr." after your answer.

Example: 40 − 66 = −26 OR 40 − 66 = 26Cr.

11. 5,643.30 − 1,857.46 = _____

12. 8,764 − 8,931 = _____

13. 37.56 − 50.25 = _____

14. 76.90 − 38.77 = _____

15. 758 − 962 = _____

LEARNING ACTIVITY 6 - ADDITION/SUBTRACTION PRACTICE

After completing this learning activity you will be half way through this course.

Are you getting accustomed to using your left hand? You're probably even building speed by now! Now, begin Learning Activity 6.

Some of the numbers in the following problems are followed by a minus (–). Add the numbers that are not followed by a minus and subtract those that are followed by a minus.

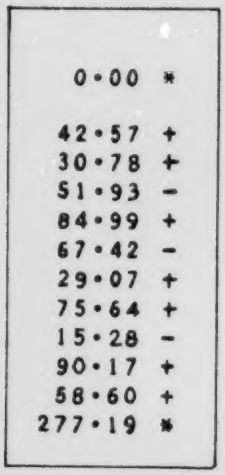
Follow these steps to do the example problem:

Example:	46	Depress 46, Depress +;
	25	Depress 25, Depress +;
	53–	Depress 53, Depress –;
	48	Depress 48, Depress +;
	73–	Depress 73, Depress –;
	–7	Depress Total.

Is your answer –7?

Record the answer. Is it a credit answer? Remember to indicate on the answer sheet those answers that are credits.

The tape for Problem 1 is shown below.



Proceed to the following problems and be sure to check them when you're finished.

LEARNING ACTIVITY 6 - ADDITION/SUBTRACTION REVIEW

1.	2.	3.	4.
42.57	1,538	8,142	53.42
30.78	5,079	4,375	64.77–
51.93–	3,855	7,024–	70.35
84.99	6,350–	9,425	25.54
67.42–	8,553	1,037–	88.43–
29.07	4,352	8,483	53.24
75.64	5,783–	3,428	64.68–
15.28–	9,668–	5,796	35.15
90.17	2,008	4,375	87.64–
58.60	7,896–	6,043	12.35
_____	_____	_____	_____

5.	6.	7.	8.
3.54	35.74	9,305–	4,259
8.47	11.79–	6,147	5,338
1.57–	78.49	3,027	1,083
8.95	42.87	5,796–	8,426
6.79	75.50	1,445	6,418–
9.17–	25.37	8,642–	2,746
2.35	18.64–	4,550	3,853
9.78–	54.27	7,816	7,440
2.38	64.39–	5,472	6,850
1.97	25.72	8,354–	5,493
____	_____	_____	_____

LEARNING ACTIVITY 7 - SUBTOTALS

When a long column of figures is being added, you may often need to know a partial total at some point before completing the problem. This partial total is known as a subtotal. A subtotal key may look like one of the following: [S] or [ST] or [SUB TOT] or [◆] .

Refer to the color coding chart to determine which finger to use to depress the subtotal key.

Use the following procedure to complete Problem 1.

Depress 572, depress +;
Depress 307, depress +;
Depress 491, depress +;
Depress 655, depress +;

Depress the subtotal key. The subtotal represents the total thus far. Record the subtotal as 2,025. Continue the problem:

Depress 456, depress +;
Depress 108, depress +;
Depress 783, depress +;
Depress 259, depress +;

Depress Total. The answer, 3,631, represents the total of the 8 figures in the problem. Problem 1 is shown on this tape:

```
   0.00  *

   5.72  +
   3.07  +
   4.91  +
   6.55  +
  20.25  0

   4.56  +
   1.08  +
   7.83  +
   2.59  +
  36.31  *
```

Use this procedure to complete the following problems.

LEARNING ACTIVITY 7 – SUBTOTALS

Try the following problems and be sure to check your answers.

1.
[illegible]
[illegible]
[illegible]
[illegible]
_____ S
[illegible]
[illegible]
[illegible]
[illegible]
_____ T

2.
10.73
42.94
80.35
73.51
_____ S
59.03
77.41
28.66
35.07
_____ T

3.
47.18
53.12
61.24
72.52
_____ S
11.32
12.89
33.76
13.24
_____ T

4.
[illegible]
[illegible]
[illegible]
_____ S
[illegible]
[illegible]
[illegible]
_____ S
[illegible]
[illegible]
[illegible]
[illegible]
_____ T

5.
11,567
13,987
45,111
_____ S
11,213
77,432
81,013
_____ S
13,765
42,512
31,871
90,132
_____ T

LEARNING ACTIVITY 8 – NON-ADD KEY

The non-add key is useful in identifying your calculations. For example, you can number the problems that follow by depressing the number of the problem and then depressing the non-add key. The non-add key may look like [N] or [NA] or [#] . Find the non-add key on your machine. All electronic calculators do not have a non-add key. If you're using an electronic calculator that does not have a non-add key, use the following instructions: Add each column of figures below omitting those numbers that have "N" beside them. Use the answer key for Learning Activity 8 to check your answers. Refer to the color coding chart to determine which finger should be used to depress the non-add key.

The **non-add key** causes the figure to print on the tape, but it is **not** added into the total. Use the non-add key to number the problems in this exercise. Example: For Problem 1 depress [1] and then depress the non-add key. Complete Problem 1. Use this procedure to number each problem throughout this exercise.

When doing calculations on invoices, the invoice number may be depressed, then the non-add key may be used to identify the particular invoice you're working on.

Add the following problems. When an "N" appears to the right of a figure, depress the non-add key instead of the plus key for that figure.

This lesson will give you additional practice in using the touch method and will aid you in developing speed and accuracy. The tape for Problem 1 is shown here.

```
      01 #
   3.75
   1.86
   3.85 #
   7.12
   8.69
   9.05 #
   3.58
  25.00 *
```

1.
375
186
385N
712
869
905N
358

2.
14.77
57.42
42.66
80.32N
53.75
15.34
95.39N

3.
8,429
1,537N
4,376
5,530
7,496
2,530N
6,772

4.
86.44
33.75
90.36
46.25N
73.14
62.35
50.74

5.
1,503
7,694N
5,015
6,425
9,448N
4,862
9,459

6.
5.42
8.15
3.78N
7.09
4.35
5.79
6.25N

7.
83.46
76.35N
18.09
26.35
63.20N
48.50
19.36

8.
9,046
4,275
8,015N
2,245
3,087
5,253
7,153N

Did you check your answers with the key in the back of your package?

LEARNING ACTIVITY 9–MULTIPLICATION

Refer to the color coding chart to determine which finger should be used to depress the multiplication key. The key will look like this: [X] . INSTRUCTIONS FOR ADDING MACHINES AND CALCULATORS ARE DIFFERENT FOR MULTIPLICATION, SO USE WHICHEVER INSTRUCTIONS BELOW ARE APPROPRIATE FOR YOUR MACHINE.

10-KEY ADDING MACHINE:

Use the following procedure to do Problem 1: (718 X 54)

Depress 718, the keys for the **multiplicand** (the figure that is to be multiplied by another figure–usually the first figure in a multiplication problem). Note: do not register this figure by depressing the +.

Depress the X key 4 times. (4 is the digit on the right in the multiplier, 54.) The multiplier is the figure by which another is multiplied–usually the second figure in a multiplication problem.

Depress the 0 key. This moves the multiplicand one digit to the left.

Depress the [X] key 5 times. (5 is the digit on the left of the multiplier, 54.)

Depress the Total Key to complete the problem. The **product** (answer to a multiplication problem) is 38,772. The tape showing Problem 1 is included for your use.

```
      .0 0 *
    7 .1 8
    7 .1 8
    7 .1 8
    7 .1 8
  7 1 .8 0
  7 1 .8 0
  7 1 .8 0
  7 1 .8 0
  7 1 .8 0
3 8 7 .7 2 *
```

Use this procedure to complete Problems 2-10. Read the section that follows on "Placing Decimal Points" so that you will be able to record correctly the answers to problems that contain decimal points.

OTHER 10-KEY ADDING MACHINES

On some machines it is necessary to depress the [X] key and the [+] key simultaneously (at the same time) to multiply.

10-KEY ADDING MACHINES WITH "R" KEY:

If your machine has a repeat [R] key, latch this key down and use the plus key as the [X] key is used in the first set of instructions above.

10-KEY ELECTRONIC CALCULATOR:

Set the decimal selector on 3 so that you will be able to round off answers to problems that contain decimal points to two decimal places. Read the section below on Placing Decimal Points:

Depress 718; depress X.
Depress 54; depress =.
Record the product on your answer sheet.

PLACING DECIMAL POINTS:

When a problem has over 2 decimal places (adding machines will print only 2 decimal places), you will be responsible for inserting the decimal point in the proper place in the product and then rounding off the answer to 2 decimal places. If you feel that you need practice on rounding off numbers, ask your instructor for the exercise, "Rounding Off Numbers." To determine where to put the decimal point in a product, count the number of decimal places in both figures of the problem. The multiplicand in Problem 2, 43.25, has 2 decimal places and the multiplier, 3.4, has one. Problem 2 has a total of 3 decimal places. The answer to Problem 2 prints on the tape as 1,470.50. Disregard the decimal point that is printed. Begin with the number on the extreme right, the 0, and count over 3 numbers to the left since the problem has a total of 3 decimal places. Insert the decimal point. The answer, before rounding off, is 147.050. Round this figure off to 2 decimal places and record the answer, 147.05, on the answer sheet. Complete problems 1-10; then, check your answers.

LEARNING ACTIVITY 9 - MULTIPLICATION

1. 718 X 54 _____
2. 43.25 X 3.4 _____
3. 1,783 X 403 _____
4. 875.3 X 18.47 _____
5. 695.18 X 39 _____
6. 55.70 X 842.7 _____
7. 8,562 X 12.4 _____
8. 3.78 X 9.753 _____
9. 1,408 X 57.2 _____
10. 85.30 X 21.17 _____

LEARNING ACTIVITY 10 - PERCENTAGES

A **percentage** is a part or portion of a whole. Percentages are used to calculate markup prices, markdown prices, discounts, commissions, dividends, etc. In each instance, the percentage must be changed to a decimal for use in the problem.

In order to do this exercise, you must be able to change percents to decimals. If you feel that you need instruction and practice in doing this, ask your instructor for the exercise, "Changing Percents to Decimals." Complete this exercise and ask your instructor to check it before proceeding.

INSTRUCTIONS:

In Problems 1 - 8 calculate the dividend or commission as called for. Multiply the **principal** (amount on which the dividend or commission is figured) by the decimal equivalent (a decimal figure of equal value as the percent) of the percentage.

Follow this procedure for Problem 1:

Depress 575.15.
Change 4% to a decimal, .04, and multiply as you learned to do in Learning Activity 9.

Get the total and record the amount of the dividend as your answer. Remember to round off your answer to two decimal places. The amount of the dividend in Problem 1 is 23.01. (The tape for problem 1 is shown for your use.)

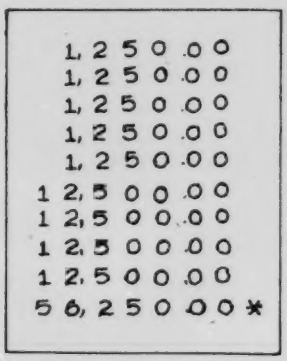
```
  575.15
  575.15
  575.15
  575.15
2300.60*
```

In some of the following problems it will be necessary to change fractions to decimals before changing the percentages to decimals. Study the following fractions and their decimal equivalents.

1/2	.5	3/8	.375	3/16	.1875
1/3	.3333	5/8	.625	5/16	.3125
2/3	.6667	7/8	.875	7/16	.4375
1/4	.25	1/12	.0833	9/16	.5625
3/4	.75	5/12	.4167	11/16	.6875
1/6	.1667	7/12	.5833	13/16	.8125
5/6	.8333	11/12	.9167	15/16	.9375
1/8	.125	1/16	.0625		

Follow this procedure to do Problem 2:

Depress $1,250.00.
Change 1/2 to decimal, .5, which will make the percentage 4.5.
Now change 4.5% to its decimal equivalent as you have learned to do, .045.
Multiply by .045 and record your answer, $56.25.
Problem 2 is shown on this tape.



Complete Problems 3 - 8. Check your answers when you've completed the problems.

I'm a-l-m-o-s-t a Pro!

LEARNING ACTIVITY 10- PERCENTAGES

FIND THE DIVIDEND:

1. 575.15 @ 4% _____
2. $1,250.00 @ 4½% _____
3. 7,437.25 @ 5¾% _____
4. $895.00 @ 5% _____

FIND THE COMMISSION:

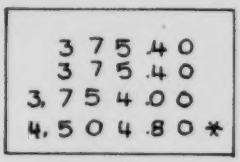
5. 10,500 @ 7% _____
6. $235.20 @ 4¼% _____
7. 5,675.25 @ 6% _____
8. $47,500.00 @ 7½% _____

LEARNING ACTIVITY 11 - PERCENTAGES: DISCOUNTS AND NET AMOUNTS

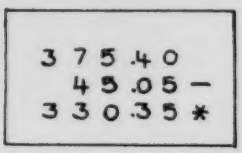
A **discount** is a deduction in an original amount. Discounts are calculated by multiplying the decimal equivalent of the percentage by the other figure, the original amount. The amount of the discount must be subtracted from the original amount to find the **net amount.**

Follow this procedure for Problem 1:

Depress the keys for the original amount, 375.40;
Multiply by the decimal equivalent of 12%;
Record the discount, 45.05, on your answer sheet.
Here is the tape showing this calculation:



Depress the keys for the original amount again and depress + .
Depress the keys for the discount, 45.05, and depress − .
Record the net amount $330.35, on your answer sheet.
This is the tape showing the remainder of Problem 1:



Follow this procedure for Problems 2 - 5.

LEARNING ACTIVITY 11–PERCENTAGES: DISCOUNTS AND NET AMOUNTS

		Discount	Net Amount
1.	375.40 less 12%		
2.	$1,275.50 less 3%		
3.	14,700 less 25%		
4.	$578.62 less 2%		
5.	28,354.75 less 15%		

In the problems that follow, calculate only the net amount. Do this by subtracting the percentage of discount from 100%, change the difference to its decimal equivalent, and multiply.

	Net Amount
Example: $552.10 less 15% = (552.10 X .85) (100% – 15% = 85%) (85% = .85)	$469.29

Complete Problems 6 - 10.

		Net Amount
6.	$4,750.25 less 12%	
7.	$350.75 less 3%	
8.	$1,300.00 less 25%	
9.	$500.00 less 2%	
10.	$156.43 less 10%	

Did you check your answers?

LEARNING ACTIVITY 12 - DIVISION

This is the last lesson. Do your best!

Most adding machines are not designed to perform a true division procedure. However, there is a procedure for you to follow to do division problems when using an adding machine. Since you can already multiply, this process will not be difficult for you. (If you are using an electronic calculator, continue with "Instructions for Electronic Calculator.")

In Problem 1, 85.32 ÷ 40, 85.32 is the **dividend**. 40 is the **divisor**. Notice that immediately below Problem 1 a reciprocal is shown. In Problem 1 the reciprocal is .025. Multiply the dividend, 85.32 by .025. Here is the tape showing Problem 1:

```
    85.32
    85.32
    85.32
    85.32
    85.32
  85.320
  85.320
2.1330 *
```

Record your answer, 2.13, rounded off to 2 decimal places.

In each problem below, multiply the **dividend** (first figure in the problem) by the **reciprocal** (a number obtained by dividing the divisor into 1) of the divisor. The reciprocal is given in each problem. Use this procedure to complete problems 2 - 10.

When writing the quotient (answer to a division problem), be sure to insert the decimal point in the correct place. In Problem 1, 5 decimal places are shown (2 in the dividend plus 3 in the reciprocal), so count over 5 places in the quotient and insert the decimal point. In Problem 2, 3 decimal places are shown, therefore, count over 3 places to the left and insert the decimal point in the quotient.

Complete the problems.

INSTRUCTIONS FOR ELECTRONIC CALCULATOR:

Set decimal selector on 3.
Depress the keys for the figures in the dividend–in Problem 1, 85.32; depress ÷ .
Depress the keys for the figures in the divisor–in Problem 1, 40; depress = .
Record the quotient, 2.13 on the answer sheet.

LEARNING ACTIVITY 12–DIVISION

1. 85.32 ÷ 40 = _____
   Reciprocal .025
2. 565 ÷ 25 = _____
   Reciprocal .04
3. 1,850 ÷ 50 = _____
   Reciprocal .02
4. 8,052 ÷ 400 = _____
   Reciprocal .0025
5. 6,975 ÷ 250 = _____
   Reciprocal .004
6. 14,375 ÷ 500 = _____
   Reciprocal .002
7. 5,300 ÷ 200 = _____
   Reciprocal .005
8. 153.27 ÷ 25 = _____
   Reciprocal .04
9. 7,800.5 ÷ 20 = _____
   Reciprocal .05
10. 352.07 ÷ 80 = _____
    Reciprocal .0125

Check your answers.

(When you feel ready, ask your instructor for your final evaluation, the Post-Test.)

STUDENT KEY TO LEARNING ACTIVITIES

LEARNING ACTIVITY 1

1. 37.64
2. 3,748
3. 4,017
4. 386.77
5. 38,076
6. 36,216
7. 383.67
8. 357.75

LEARNING ACTIVITY 2

1. 6,116
2. 60.25
3. 58.90
4. 5,713
5. 531.18
6. 54,111
7. 47,431
8. 50.17

LEARNING ACTIVITY 3

1. 1,376
2. 1,572
3. 1,686
4. 2,186
5. 356.27
6. 339.09
7. 337.62
8. 25,418

LEARNING ACTIVITY 4

1. 24.05
2. 43.66
3. 4,254
4. 4,789
5. 1,084.75
6. 486
7. 2,250.00
8. 725.05
9. 6,659
10. 3,878

STUDENT KEY TO LEARNING ACTIVITIES

LEARNING ACTIVITY 5

1. 1,270 Cr.
2. 6.16 Cr.
3. 227.56 Cr.
4. 710 Cr.
5. 65 Cr.
6. 21.75 Cr.
7. 3,853 Cr.
8. 2,315.15 Cr.
9. 23.13 Cr.
10. 85 Cr.
11. 3,785.84
12. 167 Cr.
13. 12.69 Cr.
14. 38.13
15. 204 Cr.

LEARNING ACTIVITY 6

1. 277.19
2. 4,312 Cr.
3. 42,006
4. 55.47 Cr.
5. 13.93
6. 243.14
7. 3,640 Cr.
8. 39,070

STUDENT KEY TO LEARNING ACTIVITIES

LEARNING ACTIVITY 7

1. 2,025 S
   3,631 T
2. 207.53 S
   407.70 T
3. 234.06 S
   305.27 T
4. 13,028 S
   27,817 S
   58,167 T
5. 70,665 S
   240,323 S
   418,603 T

LEARNING ACTIVITY 8

1. 2,500
2. 183.94
3. 32,603
4. 396.78
5. 27,264
6. 30.80
7. 195.76
8. 23,906

LEARNING ACTIVITY 9

1. 38,772
2. 147.05
3. 718,549
4. 16,166.79
5. 27,112.02
6. 46,938.39
7. 106,168.80
8. 36.87
9. 80,537.60
10. 1,805.80

LEARNING ACTIVITY 10

1. 23.01
2. $56.25
3. 427.64
4. $44.75
5. 735.00
6. $10.00
7. 340.52
8. $3,562.50

STUDENT KEY TO LEARNING ACTIVITIES

LEARNING ACTIVITY 11

1. 45.05 Discount
   330.35 Net Amount
2. $38.27 Discount
   $1,237.23 Net Amount
3. 3,675 Discount
   11,025 Net Amount
4. $11.57 Discount
   $567.05 Net Amount
5. 4,253.21 Discount
   24,101.54 Net Amount
6. $4,180.22
7. $340.23
8. $975.00
9. $490.00
10. $140.79

LEARNING ACTIVITY 12

1. 2.13
2. 22.60
3. 37.00
4. 20.13
5. 27.90
6. 28.75
7. 26.50
8. 6.13
9. 390.03
10. 4.40

KEYS–CHANGING PERCENTS TO DECIMALS

1. .15
2. .75
3. .05
4. .062
5. .873
6. .055
7. .03
8. .01
9. .185
10. .006
11. .163
12. .1487
13. .058
14. .25
15. .005
16. .44
17. .10
18. .90
19. .06
20. .70

CHANGING DECIMALS TO PERCENTS

1. 105%
2. 75%
3. 25.35%
4. 735%
5. 25%
6. 30%
7. 135%
8. 15%
9. .5%
10. 50%

KEY –ROUNDING OFF NUMBERS

Round to 2 decimal places:

1. 87.63
2. 19.74
3. 28.63
4. 4.90
5. 141.28

Round to 4 decimal places:

1. 8.6384
2. 14.2015
3. 26.0073
4. 3.2070
5. 82.7273

Round to 3 decimal places:

1. 14.144
2. 87.130
3. 2.136
4. 1.936
5. 5.936

BT
II–A, 38

OPERATE A 10-KEY ADDING MACHINE WITH MY LEFT HAND?? SURE!!!

INSTRUCTOR'S HANDBOOK

Prepared by

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In Cooperation With

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Module No. II–A

INSTRUCTOR'S GUIDE TO LEARNING ACTIVITIES

MODULE TITLE: OPERATE A 10-KEY ADDING MACHINE WITH MY LEFT HAND? SURE!

Learning Activity Numbers

OBJECTIVE (S): Upon completion of this booklet, you will be able to use the left hand to perform the following operations on a ten-key adding machine or calculator using the touch method (operating the keyboard without looking at your hand) with 90% accuracy: Addition; Subtraction; Multiplication (including percentages); Division.

INSTRUCTION SHEETS

I	Title: Addition	1
II	Title: Subtraction	4
III	Title: Subtraction with Credit Balances	5
IV	Title: Addition-Subtraction Practice	6
V	Title: Subtotals	7
VI	Title: Non-Add Key	8
VII	Title: Multiplication	9

STUDENT SELF-CHECKS INCLUDED IN MODULE

I	Title: Students are to check their work after each Learning Activity.	1 – 12

SUPPLEMENTAL MATERIALS

Changing Percents to Decimals Rounding off Numbers Recordkeeping I and II Transparencies (Math) (Available from the Vocational Education Media Center, Clemson University, Clemson, South Carolina 29631)	

Module No. II–A

INSTRUCTOR'S GUIDE TO LEARNING ACTIVITIES

MODULE TITLE: _____ Learning Activity Numbers

OBJECTIVE (S): _____

_____

_____

_____

_____

INSTRUCTION SHEETS (Continued)

VIII	Title: Percentages	10
IX	Title: Percentages–Discount & Net Amounts	11
X	Title: Division	12

STUDENT SELF-CHECKS INCLUDED IN MODULE

SUPPLEMENTAL MATERIALS

TEXTBOOKS AND REFERENCE BOOKS REQUIRED	
Operator's Guide accompanying the 10-Key or Calculator being used.	
MANUALS, SPECIFICATION SHEETS REQUIRED	
FILMSTRIP PRESENTATIONS & AV MATERIALS REQUIRED	
SPECIAL TOOLS, EQUIPMENT & SUPPLIES REQUIRED	
10-Key Adding Machines or Calculators	

ATTITUDES & VALUES TO BE DEVELOPED

Accuracy

* NOTES TO THE TEACHER TO ASSIST IN WORKING WITH THIS MODULE

There are many different brands of adding machines and calculators on the market today. It is impossible to show an illustration on each one in this booklet. If there is not an illustration similar to a machine that your students will use, follow these guidelines to help them use the correct procedure to operate the 10-key adding machine or calculator with the left hand:

(1) Use the 1st finger for the 9, 6, and 3 keys, and for keys that are on the right of the numeral keys from the 6-key level upward;

(2) Use the 2nd finger for the 8, 5, and 2 keys;

(3) Use the 3rd finger for the 7, 4, and 1 keys;

(4) Use the 4th finger for the keys on the left of the numeral keys;

(5) Use the thumb for keys on the right side of the keyboard from the 6-key level downward.

The booklet for the student includes a poster showing the color coding and illustrations of machines with the parts labeled and is referred to in the student's booklet as "Color Coding Chart." Students are to keep this poster on display by their desk while operating the 10-key until they have learned the correct fingering for their machine.

There are five items included in the teacher's key for use in making masters and running off copies. These are "Rounding Off Numbers," "Changing Percents to Decimals," "Answer Sheet," "Pre-Test," and "Post-Test." The first two of these sheets accompany Learning Activities 9 and 10 respectively. Keys for these pages are included in the Teacher's Key. Each answer sheet will accommodate answers for three learning activities. Students should be reminded to check their answers after **each** activity and **not** wait until they have completed an answer sheet, which would include three activities. The other 2 sheets are the Pre-Test and Post-Test. Notice that these are the same test, so only one answer key is given. Administer the Pre-Test if a student already knows the left-hand method.

Note: If you have any left-handed students, they should be instructed to use their right hand.

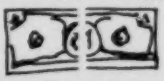
Reference: *The Ten Key Adding Machine* available from the Vocational Education Media Center, Clemson University, Clemson, South Carolina 29631.

CHANGING PERCENTS TO DECIMALS

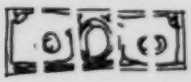
Percents are used frequently in business to express rates, such as interest and discounts, to show parts to be taken, and to present comparisons.

A number followed by a percent sign means that number "per hundred" or that many "hundredths". This gives a rule for converting a percent to another form: Drop the percent sign and put the number over 100, which means divide the number by 100. The shortcut for dividing by 100 is the simplest way to change a percent to a decimal. To change a number in percent form to its decimal equivalent, drop the percent sign and move the decimal point in the number two places to the left. If you have 50% of a $1.00 bill, you own $.50. Why?

50% = 50.% = .50

 = .50

What do you own if you have 20% of a $1.00?

 = $.20

Example: 60% = 60.% = .60 = .6
8% = 8.% = .08
6.25% = .0625
.3% = .003

Change the following percents to decimals:

1. 15% = _____
2. 75% = _____
3. 5% = _____
4. 6.2% = _____
5. 87.3% = _____
6. 5.5% = _____
7. 3% = _____
8. 1% = _____
9. 18.5% = _____
10. .6% = _____
11. 16.3% = _____
12. 14.87% = _____
13. 5.8% = _____
14. 25% = _____
15. .5% = _____
16. 44% = _____
17. 10% = _____
18. 90% = _____
19. 6% = _____
20. 70% = _____

Change decimals to percents by moving the decimal point two places to the right and adding a percent sign: .15 = 15%

1. 1.05 = _____
2. .75 = _____
3. .2535 = _____
4. 7.35 = _____
5. .25 = _____
6. .3 = _____
7. 1.35 = _____
8. .15 = _____
9. .005 = _____
10. .50 = _____

ROUNDING OFF NUMBERS

In dealing with money amounts, numbers are usually rounded to cents. If the third decimal figure (the third number on the right of the decimal) is one-half cent or more, the amount is increased by one cent. If it is less than one-half, it is dropped. For example, $1.178 would ordinarily be rounded to $1.18; $8.742 to $8.74; $3.645 to $3.65.

Other decimals may be rounded to two, three, or any number of places. If the digit to the right of the last digit to be kept is 5 or more, add 1 to the number in the last decimal place kept; if it is less than 5, drop it. For example, rounding .4578 to 3 places would give .458; rounding .15362 to 4 places is .1536; rounding .6097 to 2 places is .61.

Round off the following numbers to two decimal places.

1. 87.634 _____
2. 19.7358 _____
3. 28.6319 _____
4. 4.896 _____
5. 141.2834 _____

Round off the following numbers to four decimal places.

1. 8.63842 _____
2. 14.201493 _____
3. 26.007321 _____
4. 3.2069948 _____
5. 82.72727 _____

Round off the following numbers to three decimal places.

1. 14.14358 _____
2. 87.1299 _____
3. 2.135521 _____
4. 1.9355 _____
5. 5.93578 _____

TEACHER'S KEY

LEARNING ACTIVITY 1

1. 37.64
2. 3,748
3. 4,017
4. 386.77
5. 38,076
6. 36,216
7. 383.67
8. 357.75

LEARNING ACTIVITY 2

1. 6,116
2. 60.25
3. 58.90
4. 5,713
5. 531.18
6. 54,111
7. 47,431
8. 50.17

LEARNING ACTIVITY 3

1. 1,376
2. 1,572
3. 1,686
4. 2,186
5. 356.27
6. 339.09
7. 337.62
8. 25,418

LEARNING ACTIVITY 4

1. 24.05
2. 43.66
3. 4,254
4. 4,789
5. 1,084.75
6. 486
7. 2,250.00
8. 725.05
9. 6,659
10. 3,878

TEACHER'S KEY

LEARNING ACTIVITY 5

1. 1,270 Cr.
2. 6.16 Cr.
3. 227.56 Cr.
4. 710 Cr.
5. 365 Cr.
6. 21.75 Cr.
7. 3,853 Cr.
8. 2,315.15 Cr.
9. 23.13 Cr.
10. 85 Cr.
11. 3,785.85
12. 167 Cr.
13. 12.69 Cr.
14. 38.13
15. 204 Cr.

LEARNING ACTIVITY 6

1. 277.19
2. 4,312 Cr.
3. 42,006
4. 55.47 Cr.
5. 13.93
6. 243.14
7. 3,640 Cr.
8. 39,070

TEACHER'S KEY

LEARNING ACTIVITY 7

1. 2,025 S
   3,631 T
2. 207.53 S
   407.70 T
3. 234.06 S
   305.27 T
4. 13,028 S
   27,817 S
   58,167 T
5. 70,665 S
   240,323 S
   418,603 T

LEARNING ACTIVITY 8

1. 2,500
2. 183.94
3. 32,603
4. 396.78
5. 27,264
6. 30.80
7. 195.76
8. 23,906

LEARNING ACTIVITY 9

1. 38,772
2. 147.05
3. 718,549
4. 16,166.79
5. 27,112.02
6. 46,938.39
7. 106,168.80
8. 36.87
9. 80,537.60
10. 1,805.80

LEARNING ACTICITY 10

1. 23.01
2. $56.25
3. 427.64
4. $44.75
5. 735.00
6. $10.00
7. 340.52
8. $3,562.50

TEACHER'S KEY

LEARNING ACTIVITY 11

1. 45.05 Discount
   330.35 Net Amount
2. $38.27 Discount
   $1,237.23 Net Amount
3. 3,675 Discount
   11,025 Net Amount
4. $11.57 Discount
   $567.05 Net Amount
5. 4,253.21 Discount
   24,101.54 Net Amount
6. $4,180.22
7. $340.23
8. $975.00
9. $490.00
10. $140.79

LEARNING ACTIVITY 12

1. 2.13
2. 22.60
3. 37.00
4. 20.13
5. 27.90
6. 28.75
7. 26.50
8. 6.13
9. 390.03
10. 4.40

KEYS–CHANGING PERCENTS TO DECIMALS

1. .15
2. .75
3. .05
4. .062
5. .873
6. .055
7. .03
8. .01
9. .185
10. .006
11. .163
12. .1487
13. .058
14. .25
15. .005
16. .44
17. .10
18. .90
19. .06
20. .70

CHANGING DECIMALS TO PERCENTS

1. 105%
2. 75%
3. 25.35%
4. 735%
5. 25%
6. 30%
7. 135%
8. 15%
9. .5%
10. 50%

KEY –ROUNDING OFF NUMBERS

Round to 2 decimal places:

1. 87.63
2. 19.74
3. 28.63
4. 4.90
5. 141.28

Round to 4 decimal places:

1. 8.6384
2. 14.2015
3. 26.0073
4. 3.2070
5. 82.7273

Round to 3 decimal places:

1. 14.144
2. 87.130
3. 2.136
4. 1.936
5. 5.936

ANSWER SHEET

Name _____

Date _____

Please write all answers in the blanks below. Do not write in the instruction booklet.

LEARNING ACTIVITY # ___	LEARNING ACTIVITY # ___	LEARNING ACTIVITY # ___
1. _____	1. _____	1. _____
2. _____	2. _____	2. _____
3. _____	3. _____	3. _____
4. _____	4. _____	4. _____
5. _____	5. _____	5. _____
6. _____	6. _____	6. _____
7. _____	7. _____	7. _____
8. _____	8. _____	8. _____
9. _____	9. _____	9. _____
10. _____	10. _____	10. _____
11. _____	11. _____	11. _____
12. _____	12. _____	12. _____
13. _____	13. _____	13. _____
14. _____	14. _____	14. _____
15. _____	15. _____	15. _____
16. _____	16. _____	16. _____
17. _____	17. _____	17. _____
18. _____	18. _____	18. _____
19. _____	19. _____	19. _____
20. _____	20. _____	20. _____

PRE-TEST/POST-TEST

ANSWER SHEET

Part I

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____

Part II

1. _____
2. _____
3. _____
4. _____
5. _____

Part III

1. _____
2. _____
3. _____
4. _____
5. _____

Part IV

1. _____
2. _____
3. _____
4. _____
5. _____

PRE-TEST

I. **Instructions:**

Using your left hand, do the following problems on a 10-key adding machine or calculator. Record your answers on the answer sheet.

1. 47.36
   58.72
   18.95
   27.54
   20.08
   87.58
   61.07

   a. 329.30
   b. 321.30
   c. 3213.00
   d. 321.03

2. 18.46
   −11.89

   a. 6.57 Cr.
   b. 30.35
   c. 6.57
   d. 30.35 Cr.

3. 85.73
   −92.61

   a. 6.88
   b. 178.34
   c. 68.8
   d. 6.88 Cr.

4. 80.7 X 16.3 _____

   a. 4.95
   b. 11.41
   c. 1315.41
   d. 13154.1

5. 78.31 X 7.82 _____

   a. 612.38
   b. 64.906
   c. 61.24
   d. 612.83

PRE-TEST

(Continued)

6. 2,465 ÷ 25 _____
(Reciprocal .04)

   a. 986
   b. 98.6
   c. 9.86
   d. 616.25

7. **Find the subtotal:**

   842.66
   513.78
   417.52

   _____ S

   a. 938.92S
   b. 1773.96S
   c. 1773.69S
   d. 1938.96S

8. **Find the subtotal; continue from problem No. 7:**

   901.81
   633.50
   289.75

   _____ S

   a. 3599.02S
   b. 1773.96S
   c. 1825.06S
   d. 3955.20S

9. **Find the total; continue from problem No. 8:**

   376.40
   718.35

   _____ T

   a. 1094.75T
   b. 4693.77T
   c. 4693.79T
   d. 4693.97T

PRE-TEST

(Continued)

10. 42.17
    85.77 N
    98.06
    15.33
    10.70 N
    29.53
    38.17
    72.45

    _____

    a. 392.18
    b. 306.41
    c. 295.71
    d. 306.18

11. **Find the commission:**

    $1,525.75 @ 5% _____

    a. 76.28
    b. 76.29
    c. 762.89
    d. 1449.46

12. 603
    896–
    418
    372
    433–
    975
    668
    501–

    ____

    a. 2603
    b. 3036
    c. 1830
    d. 1206

13. 52.9 X .82 _____

    a. 43.38
    b. 33.78
    c. –37.62
    d. –43.38

PRE-TEST

(Continued)

14. 98.72
    −24.58

    a. −123.30
    b. 123.30
    c. −74.14
    d. 74.14

15. **Find the discount:**

    $1719.00 @ 20% _____

    a. $1375.20
    b. $343.80
    c. $1699.00
    d. $34.38

II. Round off the following numbers to two decimal places. Record your answers on the answer sheet.

1. 47.832

    a. 47.83
    b. 47.82
    c. 47.80
    d. 47.90

2. 18.748

    a. 18.78
    b. 18.73
    c. 18.75
    d. 18.80

3. 1,437.587

    a. 14.37
    b. 1437.58
    c. 1437.59
    d. 14.38

4. 685.3374

    a. 685.33
    b. 685.34
    c. 685.37
    d. 685.32

PRE-TEST

(Continued)

5. 12,834.6809

   a. 12834.69
   b. 12834.68
   c. 12834.61
   d. 12834.70

III. Change each of the following percentages to its decimal equivalent. Record your answers on the answer sheet.

1. 85%

   a. 85.00
   b. 8.5
   c. .85
   d. .085

2. 16.25%

   a. .1625
   b. 1625
   c. .16
   d. 162.5

3. .8%

   a. .08
   b. .088
   c. .008
   d. .80

4. 10%

   a. .010
   b. 1.00
   c. .01
   d. .10

5. 35%

   a. .035
   b. .35
   c. .0035
   d. 3.50

PRE-TEST

(Continued)

IV. Match each of the terms below with the correct definition. Record your answer on the answer sheet.

1. In the problem, 47 - 38, the first number, 47, is called the

   a. quotient
   b. minuend
   c. product
   d. difference

2. The answer to the problem in No. 1 is called the

   a. difference
   b. multiplicand
   c. quotient
   d. minuend

3. The answer to a multiplication problem is called the

   a. minuend
   b. difference
   c. multiplicand
   d. product

4. The answer to a division problem is called the

   a. product
   b. subtrahend
   c. difference
   d. quotient

5. A figure that is to be multiplied by another figure is called the

   a. subtrahend
   b. product
   c. multiplicand
   d. difference

POST-TEST

I. **Instructions:**

Using your left hand, do the following problems on a 10-key adding machine or calculator. Record your answers on the answer sheet.

1. 47.36
   58.72
   18.95
   27.54
   20.08
   87.58
   61.07

   a. 329.30
   b. 321.30
   c. 3213.00
   d. 321.03

2. 18.46
   –11.89

   a. 6.57 Cr.
   b. 30.35
   c. 6.57
   d. 30.35 Cr.

3. 85.73
   –92.61

   a. 6.88
   b. 178.34
   c. 68.8
   d. 6.88 Cr.

4. 80.7 X 16.3 _____

   a. 4.95
   b. 11.41
   c. 1315.41
   d. 13154.1

5. 78.31 X 7.82 _____

   a. 612.38
   b. 64.906
   c. 61.24
   d. 612.83

POST-TEST

(Continued)

6. 2,465 ÷ 25 _____
(Reciprocal .04)

a. 986
b. 98.6
c. 9.86
d. 616.25

7. **Find the subtotal:**

842.66
513.78
417.52

_____ S

a. 938.92S
b. 1773.96S
c. 1773.69S
d. 1938.96S

8. **Find the subtotal; continue from problem No. 7:**

901.81
633.50
289.75

_____ S

a. 3599.02S
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376.40
718.35

_____ T

a. 1094.75T
b. 4693.77T
c. 4693.79T
d. 4693.97T

POST-TEST

(Continued)

10. 42.17
    85.77 N
    98.06
    15.33
    10.70 N
    29.53
    38.17
    72.45

    _____

    a. 392.18
    b. 306.41
    c. 295.71
    d. 306.18

11. **Find the commission:**

    $1,525.75 @ 5% _____

    a. 76.28
    b. 76.29
    c. 762.89
    d. 1449.46

12. 603
    896–
    418
    372
    433–
    975
    668
    501–

    ____

    a. 2603
    b. 3036
    c. 1830
    d. 1206

13. 52.9 X .82 _____

    a. 43.38
    b. 33.78
    c. –37.62
    d. –43.38

POST-TEST

(Continued)

14. 98.72
    −24.58

    a. −123.30
    b. 123.30
    c. −74.14
    d. 74.14

15. **Find the discount:**

    $1719.00 @ 20% _____

    a. $1375.20
    b. $343.80
    c. $1699.00
    d. $34.38

II. Round off the following numbers to two decimal places. Record your answers on the answer sheet.

1. 47.832

    a. 47.83
    b. 47.82
    c. 47.80
    d. 47.90

2. 18.748

    a. 18.78
    b. 18.73
    c. 18.75
    d. 18.80

3. 1,437.587

    a. 14.37
    b. 1437.58
    c. 1437.59
    d. 14.38

4. 685.3374

    a. 685.33
    b. 685.34
    c. 685.37
    d. 685.32

POST-TEST

(Continued)

5. 12,834.6809

   a. 12834.69
   b. 12834.68
   c. 12834.61
   d. 12834.70

III. Change each of the following percentages to its decimal equivalent. Record your answers on the answer sheet.

1. 85%

   a. 85.00
   b. 8.5
   c. .85
   d. .085

2. 16.25%

   a. .1625
   b. 1625
   c. .16
   d. 162.5

3. .8%

   a. .08
   b. .088
   c. .008
   d. .80

4. 10%

   a. .010
   b. 1.00
   c. .01
   d. .10

5. 35%

   a. .035
   b. .35
   c. .0035
   d. 3.50

POST-TEST

(Continued)

IV. Match each of the terms below with the correct definition. Record your answer on the answer sheet.

1. In the problem, 47 - 38, the first number, 47, is called the

   a. quotient
   b. minuend
   c. product
   d. difference

2. The answer to the problem in No. 1 is called the

   a. difference
   b. multiplicand
   c. quotient
   d. minuend

3. The answer to a multiplication problem is called the

   a. minuend
   b. difference
   c. multiplicand
   d. product

4. The answer to a division problem is called the

   a. product
   b. subtrahend
   c. difference
   d. quotient

5. A figure that is to be multiplied by another figure is called the

   a. subtrahend
   b. product
   c. multiplicand
   d. difference

PRE-TEST/POST-TEST

Answer Key

Part I

1. B
2. C
3. D
4. C
5. A
6. B
7. B
8. A
9. B
10. C
11. B
12. D
13. A
14. D
15. B

Part II

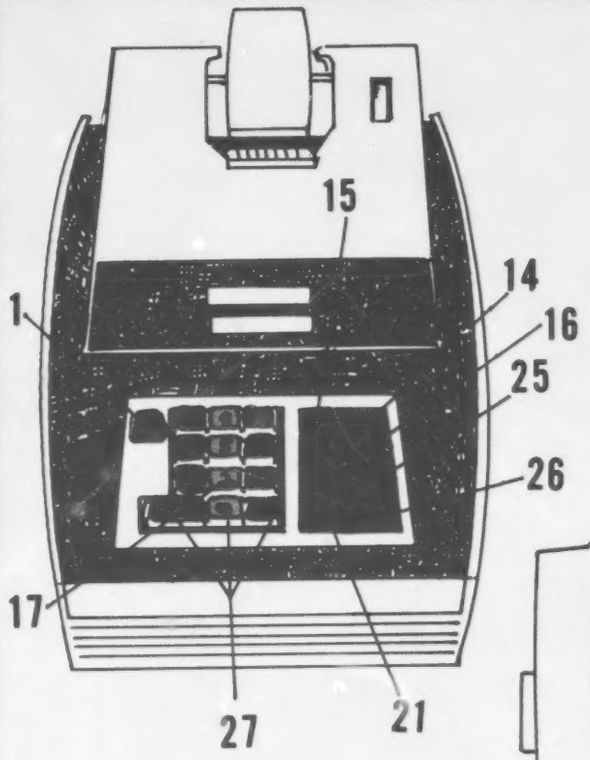
1. A
2. C
3. C
4. B
5. B

Part III

1. C
2. A
3. C
4. D
5. B

Part IV

1. B
2. A
3. D
4. D
5. C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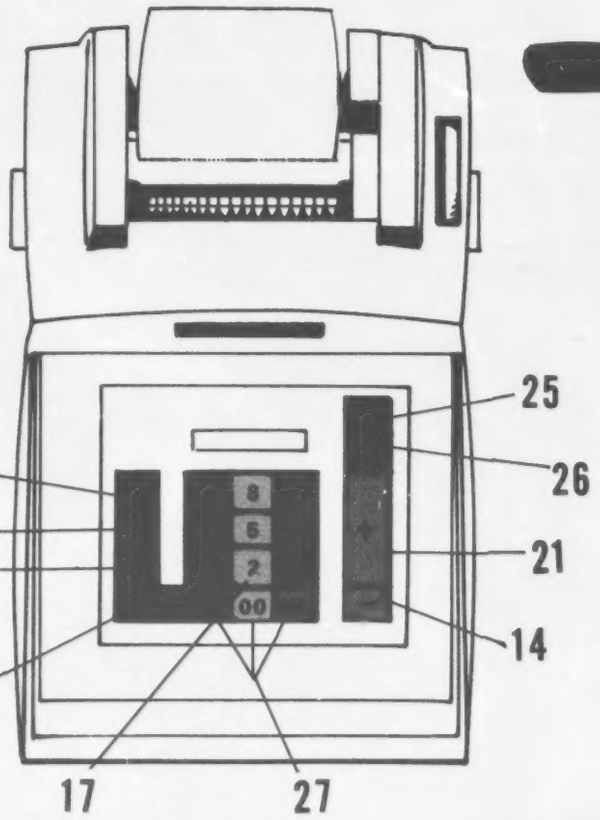
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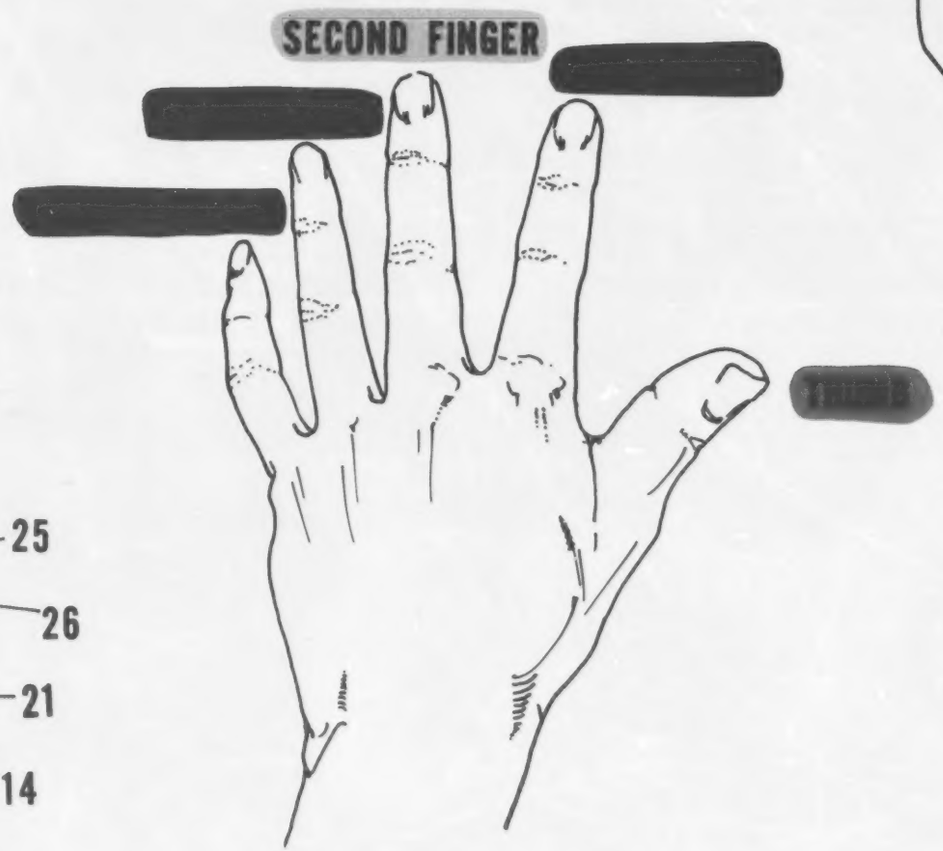
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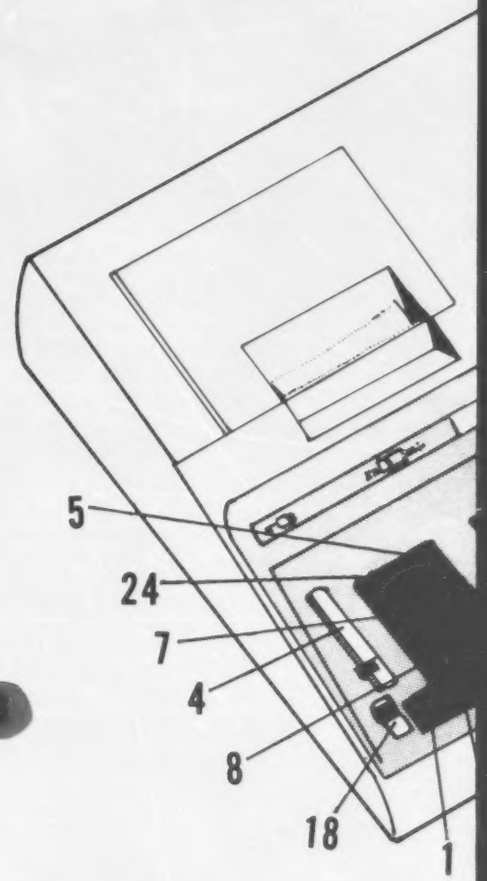
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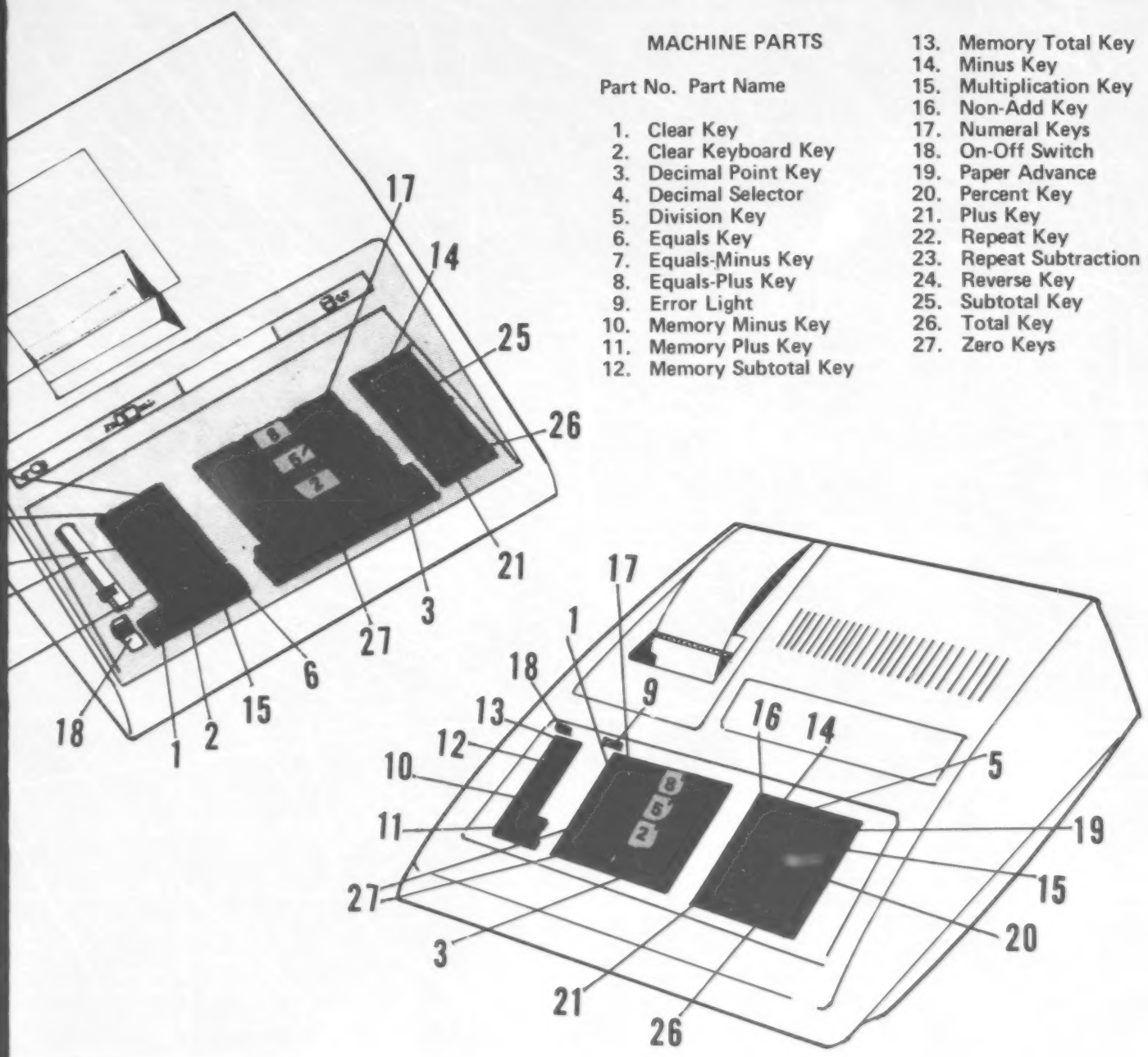
1

MACHINE PARTS

Part No. Part Name

1. Clear Key
2. Clear Keyboard Key
3. Decimal Point Key
4. Decimal Selector
5. Division Key
6. Equals Key
7. Equals-Minus Key
8. Equals-Plus Key
9. Error Light
10. Memory Minus Key
11. Memory Plus Key
12. Memory Subtotal Key
13. Memory Total Key
14. Minus Key
15. Multiplication Key
16. Non-Add Key
17. Numeral Keys
18. On-Off Switch
19. Paper Advance
20. Percent Key
21. Plus Key
22. Repeat Key
23. Repeat Subtraction Key
24. Reverse Key
25. Subtotal Key
26. Total Key
27. Zero Keys



7/1/78